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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,602	04/03/2006	Wolfgang Ripper	10191/3963	2233
26646 7590 03/20/2007 KENYON & KENYON LLP ONE BROADWAY NEW YORK, NY 10004			EXAMINER TRAN, BINH Q	
			ART UNIT	PAPER NUMBER
			3748	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/527,602

Applicant(s)

RIPPER ET AL.

Examiner

BINH Q. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-25 and 27-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-25 and 27-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/11/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in response to the amendment filed December 11, 2006.

Oath/Declaration

This application presents a claim for subject matter not originally claimed or embraced in the statement of the invention. *The claims 37 and 46 are broader than the original claim 1, since the applicant has removed the arrangement of "a feed device for feeding a reducing agent into the exhaust gas stream one of upstream of the at least one device for selective catalytic reduction and in the at least one device for selective catalytic reduction; and a switch-over device for selectively feeding the reducing agent into the exhaust gas stream one of upstream of the at least one oxidation catalytic converter and in the at least one oxidation catalytic converter."* A supplemental oath or declaration is required under 37 CFR 1.67. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 17-25, and 27-56 are rejected under 35 U.S.C. 102 (e) as being anticipated by Kakwani (Patent Number 6,826,906).

Regarding claims 17, 28-29, 37-38, and 46-47, Kakwani discloses an exhaust gas purification system for purifying an exhaust gas stream of an internal combustion engine (15), comprising: at least one oxidation catalytic converter (12) provided in an exhaust gas duct of the internal combustion engine, the at least one oxidation catalytic converter arranged as a catalytically coated particle filter (12) (e.g. See col. 15, lines 53-67; col. 16, lines 1-67; col. 17, lines 1-48); at least one device (14A, 14B) for selective catalytic reduction of the exhaust gas stream, the at least one device (14A, 14B) being provided downstream of the at least one oxidation catalytic converter (12); and a feed device (e.g. 18) for feeding a reducing agent into the exhaust gas stream one of upstream of the at least one device for selective catalytic reduction and in the at least one device for selective catalytic reduction; and a switch-over device (e.g. 72, 74) for selectively feeding the reducing agent into the exhaust gas stream one of upstream of the

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at least one oxidation catalytic converter and in the at least one oxidation catalytic converter (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claims 18, 41-42, Kakwani further discloses that the gas purification system as recited in switch-over device is a valve (74) (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claim 19, Kakwani further discloses that the switch-over device is a directional control valve (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claims 20, 43, Kakwani further discloses that the gas purification system as recited in switch-over device is a mixing valve (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claims 21, 44, 52, Kakwani further discloses that the switch-over device is temperature-controlled (e.g. See col. 9, lines 19-67; col. 10, lines 1-25).

Regarding claim 22, Kakwani further discloses that the switch-over device is temperature-controlled (e.g. See col. 9, lines 19-67; col. 10, lines 1-25).

Regarding claims 23, 45, Kakwani further discloses that the feed device has a metering device and a nozzle for distributing and atomizing the reducing agent in the exhaust gas stream (e.g. See col. 7, lines 5-67; col. 8, lines 1-21).

Regarding claim 24, Kakwani further discloses that the feed device has a metering device and a nozzle for distributing and atomizing the reducing agent the exhaust gas stream (e.g. See col. 7, lines 5-67; col. 8, lines 1-21).

Regarding claim 25, Kakwani further discloses that the at least one oxidation catalytic converter is disposed in the immediate vicinity of an exhaust gas outlet of the internal combustion engine (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claims 27, 39, 48, Kakwani further discloses at least one particle filter provided between the at least one oxidation catalytic converter and the at least one device for selective catalytic reduction (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claims 30, 49-50, Kakwani further discloses that the reducing agent is fed into the at least one oxidation catalytic converter and the at least one device for selective catalytic reduction simultaneously during a transition period (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Regarding claims 31, 51, Kakwani further discloses that the reducing agent is fed by a nozzle (e.g. See col. 7, lines 5-67; col. 8, lines 1-21).

Regarding claim 32, Kakwani further discloses that the selective feeding of the reducing agent function of temperature (e.g. See col. 7, lines 5-67; col. 8, lines 1-21).

Regarding claims 33-34, 53-54, Kakwani further discloses that the reducing agent is fed into the at least one oxidation catalytic converter at an exhaust gas temperature of less than approximately 150⁰C to 200 ⁰C in the at converter least one oxidation catalytic (e.g. See col. 9, lines 19-67; col. 10, lines 1-25).

Regarding claims 35-36, 55-56, Kakwani further discloses that the reducing agent is fed into the at least one device for selective catalytic reduction at an exhaust gas temperature of more than approximately 150⁰C to 200 ⁰C in the at least one device for selective catalytic reduction (e.g. See col. 9, lines 19-67; col. 10, lines 1-25).

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Regarding claim 40, Kakwani further discloses that wherein a feed device for feeding reducing agent into the exhaust gas stream is provided one of (a) upstream from and (b) in the device for selective catalytic reduction, and a switch over device for selectively feeding the reducing agent is provided one of (a) upstream from and (b) inside the at least one oxidation catalytic converter (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17-25, and 27-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu et al. (Wu) (Patent Number 6,293,097) in view of Kakwani.

Regarding claims 17, 28-29, 37-38, and 46-47, Wu discloses an exhaust gas purification system for purifying an exhaust gas stream of an internal combustion engine (14), comprising: at least one oxidation catalytic converter (22) provided in an exhaust gas duct of the internal combustion engine; at least one device (24) for selective catalytic reduction of the exhaust gas stream, the at least one device (8) being provided downstream of the at least one oxidation catalytic converter (22); and a feed device (e.g. 10, 30, 50) for feeding a reducing agent into the exhaust gas stream one of upstream of the at least one device for selective catalytic reduction and in the at least one device for selective catalytic reduction (See col. 3, lines 1-65); and a switch-

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over device (e.g. 66, 70) for selectively feeding the reducing agent into the exhaust gas stream one of upstream of the at least one oxidation catalytic converter and in the at least one oxidation catalytic converter (e.g. See col. 4, lines 42-67; col. 5, lines 1-53). However, Wu fails to disclose that the at least one oxidation catalytic converter arranged as a catalytically coated particle filter.

Kakwani teaches that it is conventional in the art, to use an oxidation catalytic converter arranged as a catalytically coated particle filter (e.g. See Figs. 14A-14C; col. 14, lines 19-67; col. 15, lines 1-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to use an oxidation catalytic converter arranged as a catalytically coated particle filter of Wu, as taught by Kakwani for the purpose of trapping particulate in the exhaust gas, so as to reduce the poisoned materials in the purifying catalyst and to reduce amount of nitrogen oxides in the exhaust gas of the lean-burn engine, and further improve the performance of the engine and the efficiency of the emission device.

Regarding claims 18, 41-42, Wu further discloses that the gas purification system as recited in switch-over device is a valve (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claim 19, Wu further discloses that the -over device is a directional control valve (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 20, 43, Wu further discloses that the gas purification system as recited in switch-over device is a mixing valve (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 21, 44, 52, Wu further discloses that the switch-over device is temperature-controlled (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

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Regarding claim 22, Wu further discloses that the switch-over device is temperature-controlled (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 23, 45, Wu further discloses that the feed device has a metering device and a nozzle for distributing and atomizing the reducing agent in the exhaust gas stream (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claim 24, Wu further discloses that the feed device has a metering device and a nozzle for distributing and atomizing the reducing agent the exhaust gas stream (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claim 25, Wu further discloses that the at least one oxidation catalytic converter is disposed in the immediate vicinity of an exhaust gas outlet of the internal combustion engine (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 27, 39, 48, Wu further discloses at least one particle filter provided between the at least one oxidation catalytic converter and the at least one device for selective catalytic reduction (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 30, 49-50, Wu further discloses that the reducing agent is fed into the at least one oxidation catalytic converter and the at least one device for selective catalytic reduction simultaneously during a transition period (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 31, 51, Wu further discloses that the reducing agent is fed by a nozzle (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claim 32, Wu further discloses that the selective feeding of the reducing agent function of temperature (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 33-34, 53-54, Wu further discloses that the reducing agent is fed into the at least one oxidation catalytic converter at an exhaust gas temperature of less than approximately 180 °C in the at converter least one oxidation catalytic (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claims 35-36, 55-56, Wu further discloses that the reducing agent is fed into the at least one device for selective catalytic reduction at an exhaust gas temperature of more than approximately 180 °C in the at least one device for selective catalytic reduction (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Regarding claim 40, Wu further discloses that wherein a feed device for feeding reducing agent into the exhaust gas stream is provided one of (a) upstream from and (b) in the device for selective catalytic reduction, and a switch over device for selectively feeding the reducing agent is provided one of (a) upstream from and (b) inside the at least one oxidation catalytic converter (e.g. See col. 4, lines 42-67; col. 5, lines 1-53).

Response to Arguments

Applicant's arguments filed December 11, 2006 have been fully considered but they are not completely persuasive. ***Claims 17-25, and 27-56 are pending.***

Applicant's arguments with respect to claims 17-25, and 27-56 have been considered but are moot in view of the new ground(s) of rejection as discussed above.

Applicant's amendment (Claims 17-25, and 27-56) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL See

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MPEP, 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of two patents:

Khair et al. (Pat. No. 6718757), and Shimoda et al. (Pat. No. JP JP02002295243A) all disclose an exhaust gas purification for use with an internal combustion engine.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reach on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT
March 17, 2007



Binh Q. Tran
Patent Examiner
Art Unit 3748